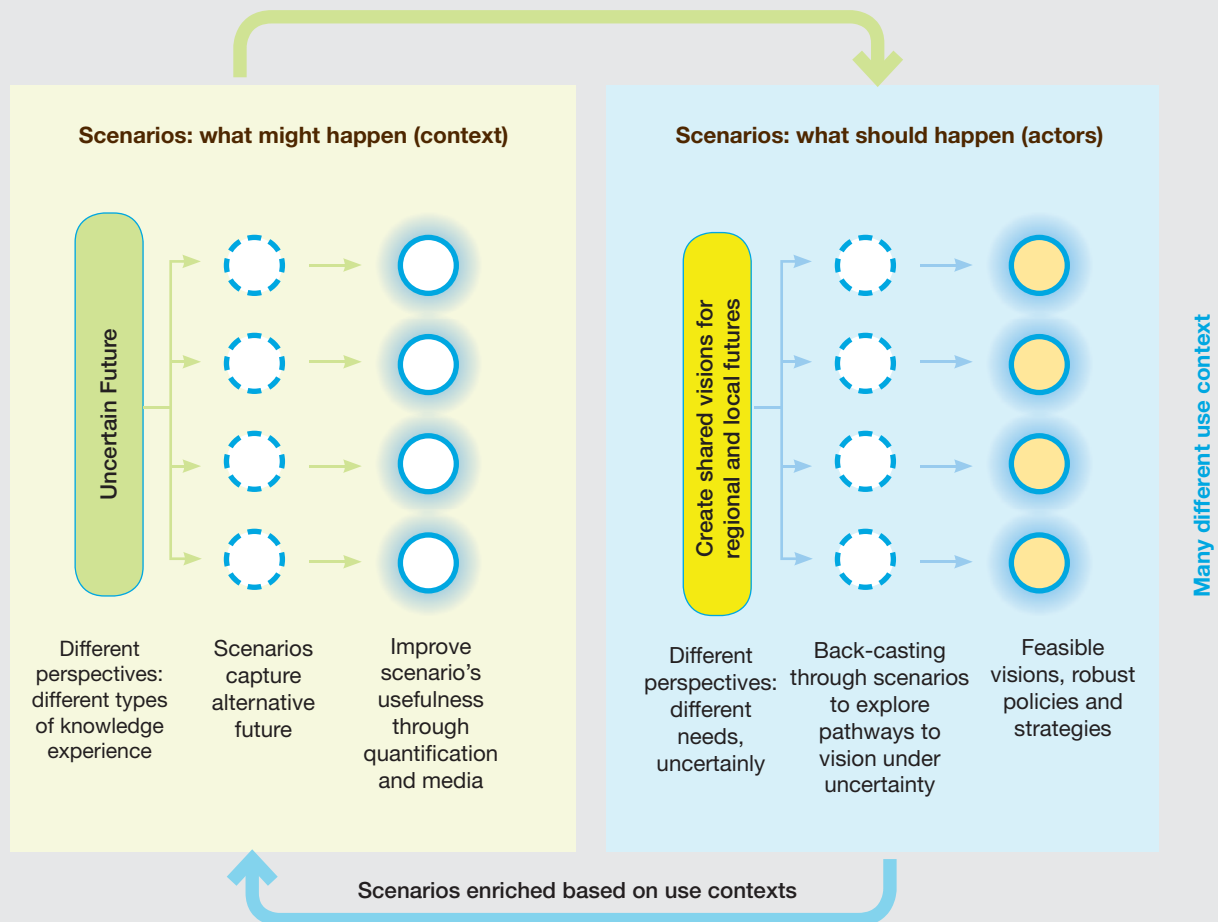




RESEARCH PROGRAM ON
Climate Change,
Agriculture and
Food Security



Developing future scenarios for climate-smart agriculture and food security



Source: J Vervoort and P Ericksen, 2012

Achieving food security through sustainable agriculture under climate change is a major concern for South Asia. Understanding these challenges requires an analysis of the transformational changes that will be needed in terms of policies, institutions and governance in agricultural production and food security in the future.

A well-developed futures scenario can offer rich information and data in response to regional and sub-regional situations. With the help of researchers from the University of Oxford, CCAFS designed a participatory and interactive method to develop future scenarios for agricultural development and food security. This initiative brought together policymakers, researchers, private sector partners, NGOs, and other stakeholders to build future scenarios for South Asia that look at social, political and economic uncertainties in agricultural development and food security under climate change. These scenarios help inform decision-making under uncertainty through the development of a range of alternative strategies.

Objectives

- To explore key regional socio-economic and governance uncertainties for food security, environment and livelihoods under climate change through participatory and integrated qualitative-quantitative analysis.
- To use these scenarios with regional, global and local actors for strategic planning and research.
- To explore the feasibility of strategies, technologies and policies toward improved food security, environments and livelihoods under different socio-economic and governance conditions.

Locations

South Asia

Partners

University of Oxford, Environmental Change Institute and International Food Policy Research Institute (IFPRI)

Approach

- Bring together partners from diverse backgrounds representing a wide range of regional perspectives to develop exploratory scenarios of the future. These scenarios focus on capturing key future uncertainties.
- Increase the credibility and relevance of the scenarios by creating quantitative information through the use of IFPRI's IMPACT model and IIASA'S GLOBIOM model. This quantification work can produce counter-intuitive consequences of the scenarios that would require reconsideration of the narratives and lead to improved scenarios.

- Use the scenarios in strategic policy engagements with decision-makers to develop feasible strategies to improve food security, environments and livelihoods under climate change.
- Disseminate the scenarios to key users and work with them in their own contexts.

Initial Results

- A workshop in Colombo, Sri Lanka, in 2012, brought together regional stakeholders from development organizations, governments, the private sector, civil society groups, academia and the media to outline future socio-economic drivers of change for food security, environments and livelihoods in South Asian countries of Bangladesh, Nepal, India, Pakistan and Sri Lanka.
- Five scenarios emerged from the workshop – *The New USA*, *Jugad*, *Unstable Flourishing*, *People Power*, and *Precipice*. These were subsequently developed into draft narratives. Each scenario represents a combination of human capital (K), governance and institutions (I), science technology and innovation (S), political stability and conflict (S), economic structure (E), and demographic (D).
- In a workshop in Kathmandu, Nepal, in 2013, regional stakeholders provided inputs to quantify development pathways under the selected scenarios.
- Participants suggested country level policy, and the institutional and investment changes for each scenario. A number of these suggestions are currently being explored further and followed up depending on policy/investment time lines.

ABOUT CCAFS

The CGIAR Research programme on Climate Change, Agriculture and Food Security (CCAFS) is a strategic partnership of CGIAR and Future Earth, led by the International Center for Tropical Agriculture (CIAT).

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